

Appl. No. 10/645,764
Resp. dated October 25, 2004
Reply to Office Action of October 1, 2004

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (original) A catheter braid formed from at least two continuous wires woven together, the catheter braid comprising:

a proximal braid section in which each of the continuous wires has a proximal cross-sectional area; and

a distal braid section in which each of the continuous wires has a distal cross-sectional area;

wherein for each continuous wire, the distal cross-sectional area of said continuous wire is less than the proximal cross-sectional area of said continuous wire.

2. (original) The catheter braid of claim 1, wherein each of the at least two continuous wires has a proximal portion corresponding to the proximal braid section and a distal portion corresponding to the distal braid section, where the proximal portion of each continuous wire has a cross-sectional area equal to the proximal diameter and the distal portion of each continuous wire has a cross-sectional area equal to the distal diameter.

3. (original) The catheter braid of claim 2, wherein each of the at least two continuous wires is formed, prior to weaving, with the proximal portion having the proximal cross-sectional area and the distal portion having the distal cross-sectional area.

4. (original) The catheter braid of claim 2, wherein each of the at least two continuous wires is formed with the proximal portion and the distal portion each having cross-sectional areas equal to the proximal cross-sectional area, and the distal portion is subsequently reduced in cross-sectional area to equal the distal cross-sectional area.

Appl. No. 10/645,764
Resp. dated October 25, 2004
Reply to Office Action of October 1, 2004

5. (original) The catheter braid of claim 4, wherein the distal portion is etched subsequent to weaving the braid to reduce the cross-sectional area of the distal portion to equal the distal cross-sectional area.

6. (original) The catheter braid of claim 1, wherein the distal cross-sectional area is about one-third less than the proximal cross-sectional area.

7. (original) The catheter braid of claim 2, wherein the wire has a round cross-sectional area with the proximal portion of the wire having a diameter of about 1.5 millimeters and the distal portion of the wire having a diameter of about 1.0 millimeters.

8. (original) The catheter braid of claim 1, wherein each of the continuous wires comprises stainless steel.

9. (original) The catheter braid of claim 2, wherein each of the continuous wires has a rectangular or square cross section.

10. (original) A catheter having a distal end and a proximal end, the catheter having a distal region proximate the distal end, the catheter comprising:

an inner layer extending from the distal end to the proximal end; and

a reinforcing braid layer disposed over the inner layer, the braid layer formed from at least two continuous wires woven together, the braid layer comprising a proximal braid section in which each of the continuous wires has a proximal cross-sectional area, and a distal braid section in which each of the continuous wires has a distal cross-sectional area;

wherein the distal cross-sectional area of each of the continuous wires is less than the proximal cross-sectional area of each of the continuous wires.

11. (original) The catheter of claim 10, wherein the distal braid section is proximate the distal region of the catheter.

Appl. No. 10/645,764
Resp. dated October 25, 2004
Reply to Office Action of October 1, 2004

12. (original) The catheter of claim 10, further comprising an outer layer disposed over the reinforcing braid layer.

13. (original) The catheter of claim 10, wherein each of the at least two continuous wires has a proximal portion corresponding to the proximal braid section and a distal portion corresponding to the distal braid section.

14. (original) The catheter of claim 13, wherein each of the at least two continuous wires is formed with the proximal portion having a cross-sectional area equal to the proximal cross-sectional area and the distal portion having a cross-sectional area equal to the distal cross-sectional area.

15. (original) The catheter of claim 13, wherein each of the at least two continuous wires is formed with the proximal portion and the distal portion each having cross-sectional areas equal to the proximal cross-sectional area, and the distal portion is subsequently reduced in cross-sectional area to a cross-sectional area equal to the distal cross-sectional area.

16. (original) The catheter of claim 15, wherein the distal portion is etched subsequent to weaving the braid to reduce the cross-sectional area of the distal portion to the distal cross-sectional area.

17. (original) The catheter of claim 10, wherein the distal cross-sectional area is about one-third less than the proximal diameter.

18. (original) The catheter of claim 13, wherein the wire has a round cross-sectional area with the proximal portion of the wire having a diameter of about 1.5 millimeters and the distal portion of the wire having a diameter of about 1.0 millimeters.

19. (original) The catheter of claim 10, wherein each of the continuous wires includes a square or rectangular cross-sectional area.

Appl. No. 10/645,764
Resp. dated October 25, 2004
Reply to Office Action of October 1, 2004

20. (withdrawn) A method of forming a catheter having a distal end and a proximal end, the catheter comprising an inner layer and a braid layer, the method comprising the steps of:

forming the braid layer by weaving at least two continuous wires, the braid layer having a proximal section in which each of the wires has a proximal cross-sectional area and a distal section in which each of the wires has a distal cross-sectional area that is less than the proximal cross-sectional area; and

positioning the braid layer over the inner layer.

21. (withdrawn) The method of claim 20, further comprising a step of securing an outer layer over the braid layer.

22. (withdrawn) The method of claim 20, wherein each of the at least two continuous wires has a proximal portion corresponding to the braid proximal section and a distal portion corresponding to the braid distal section.

23. (withdrawn) The method of claim 22, wherein each of the at least two continuous wires is formed with the proximal portion having the proximal cross-sectional area and the distal portion having the distal cross-sectional area prior to weaving.

24. (withdrawn) The method of claim 22, wherein each of the at least two continuous wires is formed with the proximal portion and the distal portion each having the proximal cross-sectional area, and the distal portion is subsequently reduced in cross-sectional area to the distal cross-sectional area.

25. (withdrawn) The method of claim 24, wherein the distal portion is etched subsequent to weaving the braid in order to reduce the cross-sectional area of the distal portion to the distal cross-sectional area.